

From: Jeanne Briskin/DC/USEPA/US
Sent: 4/19/2012 7:02:35 PM
To: Muehlenbachs@rff.org
CC: Fred Hauchman/DC/USEPA/US@EPA; David Jewett/ADA/USEPA/US@EPA; Susan Burden/DC/USEPA/US@EPA; Ralph Ludwig/ADA/USEPA/US@EPA
Subject: Re: Isotopic fingerprinting of gas migration

Dear Lucija,

Thanks for your note.

We are doing isotopic fingerprinting of methane and associated gases in our study but do not know at this time to what extent, if any, we may need to draw on outside resources. We'll definitely keep your dad in mind if we need assistance in this area. Thanks for bringing this opportunity to our attention.

Jeanne

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From: "Muehlenbachs, Lucija" <Muehlenbachs@rff.org>
To: Jeanne Briskin/DC/USEPA/US@EPA, Fred Hauchman/DC/USEPA/US@EPA
Date: 04/16/2012 11:02 AM
Subject: Isotopic fingerprinting of gas migration

Dear Jeanne and Fred,

I met you both when Alan Krupnick, Sheila Olmstead, and I came to the EPA to discuss our RFF study on the risks associated with shale gas.

I read that the EPA has not examined the cause of methane in water at Dimock (I am not sure if this is true, because after all I read this in the popular press). If so, my father helped develop the technique of isotopic fingerprinting of the source of migrating methane from gas wells, and has analyzed thousands of samples from gas wells in Alberta. I know that he would be happy to analyze water samples for the EPA if you wanted to run an isotopic analysis of the source of the methane. He is a professor of geochemistry at the University of Alberta and has a state of the art, uncompromised laboratory. To determine the source of the methane one needs to compare the isotope ratios of the methane, ethane, butane, and propane (shale gas actually has a very unique reversed ratio). He explained this during RFF's conference here:

<http://www.rff.org/Events/Pages/Managing-the-Risks-of-Shale-Gas.aspx>

His slides:

http://www.rff.org/Documents/Events/Seminars/111114_Managing_the_Risks_of_Shale_Gas/Mulenbachs%2

0Nov%2014FINAL.pdf

and his CV:

<http://easweb.eas.ualberta.ca/person/Muehk>

Please let him know if you would like a pro bono analysis and explanation of the isotopic fingerprint of water wells in the EPA study.

Sincerely,

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Fellow

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